NK 460
N5C77c
CHM

GALLERY GUIDE TO

ELEMENTS OF DESIGN

A guide to a permanent changing exhibition suggesting the nature of the Museum's collections and the uses they serve.

SURFACE

Surface, as an element of design, records or creates the textural character of an object. As a result of natural structure, every object has its own unique surface and a designer may rely exclusively on nature for a finished article's artistic quality.

- 1 Two panels; carved oak
from the Château of Asnières
France; about 1725
Given by the Council
From the collection of Léon Decloux 1908-24-18a, b
- 2 Pitcher; earthenware
Iran, Gurgan; 8th-9th century, A.D.
Purchased in memory of Georgiana L. McClellan
1957-198-2

On the other hand, he may transform a natural surface into another, artificially created surface, either through technical change of the medium or through manipulation of other design elements. Visually, surface is allied to our sense of touch. Aesthetic reactions to surface are probably the result of physical sensations dependent on touch translated into a variety of associated ideas, sensations that allow us to sense the "feel" of any particular object.

- 3 Cap; quilted cotton and linen
France, La Rochelle; 19th century
Purchased in memory of Mrs. Samuel W. Bridgham
1951-46-2
- 4 Panel for a shroud; raffia cut and uncut velvet
Republic of the Congo, Kasai Province,
Baluba tribe; late 19th century
Purchased, Au Panier Fleuri Fund 1957-110-3
- 5 Tankard; stoneware and pewter
Germany, Siegburg; 16th century
Purchased in memory of Georgiana L. McClellan
1959-34-2
- 6 Teapot; black basalt stoneware and brass
England, Staffordshire; about 1780
Bequest of Erskine Hewitt 1938-57-305

- 7 *Tent for a Summit Talk*, wall hanging; batik printed cotton
Mary Dumas
United States, California; 1961
Purchased, Au Panier Fleuri Fund 1961-124-1

- 8 *Study in Textures*, etching; soft ground etching and aquatint
Stephen Charles Gussman (1939-)
United States, New York; 1960
Given by the Cooper Union School of Art and Architecture 1961-32-12

- 9 Vase; porcelain with incised decoration
China; K'ang Hsi period (1662-1722)
Bequest of Annie I. Kane 1926-22-192

- 10 Bowl; high-fired earthenware
Madeleine Vermes
United States, New York; 1955
Purchased in memory of Georgiana L. McClellan 1955-64-6

- 11 Bowl; stoneware
Emile Decoeur (1876-1953)
France, Paris; 1940-1950
Given by W. B. Dalton NK
460 1960-50-1
N5C77C
CHM

- 12 Textile; cut and uncut velvet
Italy; 17th century
Given by J. Pierpont Morgan 1902-1-426

- 13 Textile; silk and metal chiffon
Elsberg & Cie.
France, Lyons; 1915-1925
Bequest of Herman A. Elsberg 1938-82-393

- 14 Rabbit; porcelain with underglaze painting
Royal Copenhagen Factory
Denmark, Copenhagen; about 1920
Bequest of Annie I. Kane 1926-37-210

- 15 Textile panel; silk embroidery on linen
Greek Islands; 18th-19th century
Given by the Provident Securities Company from the collection of Mr. and Mrs. William H. Crocker 1955-133-15

- 16 Purse; silk tapestry, copper and jadeite frame
Edith Huntington Snow (1876-1960)
United States; 1927
Given by Miss Edith Huntington Snow 1956-84-17

- 17 Presentation box; cinnabar lacquer
China, Soochow; Ch'ien Lung Period (1735-1795)
Bequest of Mary Hearn Greims 1927-5-28

- 18 Wallpaper; reproduction of 18th century wallpaper in the Museum's collection
Thomas Strahan Company
United States, New York; 1922
Given by Miss Grace Lincoln Temple 1938-62-71

FORM

Form defines an object's shape in its structural relation to space. With like shapes recurring in differing historical periods and in a variety of media, design's shapes are largely inspired by either functional necessity or shapes admired in nature.

- 19 Deep bowl; painted earthenware
Iran, from Syalk Necropolis B.; 11th-10th century
B. C.
Purchased in memory of Georgiana L. McClellan
1957-34-1
- 20 Bowl; ebony, ivory and silver
England; 1780-1789
Given anonymously
1957-100-1
- 21 *Perspectiva Corporum Regularium*
Wenzeln Jamnitzer (1508-1588); Engraved by Jost
Amman (1539-1591)
Germany, Nuremberg; 1586 (ed. of 1618)
Purchased in memory of David Wolfe Bishop
1957-192-3
- 22 Design for a long-case clock; etching
Antoine-Francois Vassé (1683-1735); etched by
Charles Nicolas Cochin, the Younger (1715-1790)
France; about 1734
Given by the Council
From the collection of Léon Decloux
1921-6-48
- 23 Side chair; carved cherry wood
Hector Guimard (1867-1942)
France; 1908
Given by Mme. Hector Guimard
1948-114-1
- 24 Charcoal stove; glazed earthenware
France; mid-18th century
Given by the Misses Hewitt
1931-88-178

Spatially, an object may itself be three-dimensional in shape, may create a three-dimensional effect through a juxtaposition of solids and voids, or it may create a three-dimensional illusion on a two-dimensional surface.

- 25 Armchair; metal tubing and gray canvas
Marcel Breuer (1902-)
Bauhaus Workshop
Germany, Dessau; 1925
Given by Gary Laredo
1956-10-1
- 26 Textile; silk and metal
Japan; late 19th-early 20th century
Given in memory of Alice Neill Carter
1937-34-1
- 27 Textile; block-printed linen
Gregory Brown
England; about 1925
Given by Miss Marian Hague
1937-1-13

- 28 Textile; wool and linen tapestry
Egypt; 3rd-4th century A.D.
Given by J. Pierpont Morgan 1902-1-151
From the Stanislas Baron Collection
- 29 Wine jug; terra-cotta covered with black varnish
Italy, region of Naples; 3rd century B.C.
Given by Charles W. Gould 1915-11-39
- 30 Sugar bowl with cover; *Melamine* Boontonware
Designed by Belle Kogan
United States, New Jersey; about 1958
Given by Miss Belle Kogan 1959-59-45
- 31 Newel post; carved oak
France; 1740-1750
Given by Miss Eleanor Garnier Hewitt 1909-15-1

Frequently, on a flat surface, abstractions of shapes have a deliberately two-dimensional character, representing another approach to form in design.

- 32 *Le Gros Poisson Noir*, plate; earthenware,
slip and incised decoration
Pablo Picasso (1881-)
France, Vallauris; 16 April, 1957
Given by Mr. and Mrs. Daniel Saidenberg
1960-112-1
- 33 Chair back; wool and silk embroidery on linen
France; early 18th century
Given by Harvey Smith 1954-82-9

LINE

Line, or linear design, is most often a natural result of a designer's use of particular materials. Wrought iron, metal wire, lace, and nearly all forms of calligraphic design seem to lend themselves best to two-dimensional decoration. A corollary and equally natural result is the frequent similarity of motifs in linear design.

- 34 *Trains*, screen-printed on glazed cotton
Designed by Saul Steinberg (1908-)
United States, New York; 1950-1955
Given by Patterson Fabrics 1958-153-1
- 35 *Trains*, screen-printed wallpaper
Designed by Saul Steinberg (1908-)
United States, New York; 1950-1955
Given by Piazza Prints, Inc. 1956-177-1
- 36 Composition in calligraphy
Turkey; 18th century
Purchased in memory of John R. Safford 1953-164-1
- 37 Panel; needle lace, 'Point de Venise'
Italy, Venice; 17th century
Given by Raimundo de Madrazo 1898-1-1

Function is a further determining influence on linear design. An object's use may be defined, as well as its shape emphasized and the technique of its creation explained, all through the individual nature of linear design.

- 38 Grille; wrought iron
France; mid-18th century
Given by George Arnold Hearn 1901-11-2
- 39 Woodblock for printing textiles
Persia; 17th century
Purchased, Au Panier Fleuri Fund 1957-99-1
- 40 Birdcage; ivory, wood, metals, jade, enamel,
kingfisher feathers, amethyst
China; Ch'ien Lung Period (1735-1796)
Given by Thomas F. Ryan 1926-22-97
- 41 Lantern clock (Yagura-Dokei); lacquer on wood
Japan; 18th century
Bequest of Annie I. Kane 1926-22-97
- 42 Rocking chair; wrought iron with plush upholstery
Designed by Peter Cooper (1791-1883)
United States, Trenton Iron Works; about 1860
Given by Norvin Hewitt Green 1938-58-1457

COLOR

Color, the most commonplace of visual luxuries, is among the most difficult to understand of the elements of design. The results of intuitive uses of color by artists, craftsmen and designers frequently parallel the facts ascertainable through scientific research. There is no color without light, according to the laws of physics, and all color is constantly changing as light itself changes, however imperceptibly.

43 Additive mixture of color

The three additive primary colors of light are red, blue and green, here falling on the cube from filtered light sources above.

Beneath the cube the mixture of red and blue produces magenta, that of blue and green produces cyan, and that of green and red produces yellow. In each case, the color produced is complementary to the color of the light source intercepted by the cube. Yellow is complementary to blue, cyan to red, and magenta to green.

The mixture of red, blue and green light at a single point on the top surface of the cube produces white light.

Diverse phenomena in nature create colors in full range of the spectrum, similar to the phenomena seen in a rainbow, a soap bubble and an oil slick.

- 44 Candelabrum; cut glass on base of ormolu and Wedgwood jasperware
Given by Irwin Untermyer 1956-179-1A
- 45 Headdress ornament; kingfisher feathers on lacquer China; mid-19th century
Given by William Dangaix Allen 1939-73-11
- 46 Flask; blown and cut glass
Iran; 9th-10th century
Purchased in memory of Annie I. Kane 1959-90-1
- 47 Bracelet; glass
Syria; 1st-5th century A.D.
Given anonymously 1928-15-1
- 48 *Newton's Rings*, spectrum produced on glass film suspended in bubble as a result of natural phenomenon called *interference*.
Designed and made by H. O. Morgan
United States, New Jersey; 1960
Given by H. O. Morgan 1960-251-1
- 49 Abalone shell
- 50 Vase; *Favrile* glass
Louis Comfort Tiffany (1848-1933)
United States, New York; 1900-1910
Given anonymously 1952-166-33
- 51 Sheet diffraction grating, 13,400 lines to the inch, used for measurement of wave lengths in the visible spectrum.
Given by the Physics Department, Cooper Union School of Engineering

Color may be imagined as a three-dimensional solid consisting of hue, value (relative degree between white and black), and chroma (relative brightness).

- 52 Four cross sections of a pigment solid constructed around a slanting value scale axis:
 - a. Top of pigment solid viewed from above
 - b. Middle cross-section of pigment solid
 - c. Bottom of pigment solid
 - d. Vertical cross-section of cylindrical pigment solidOil on fiberboard
Hilaire Hiler (1898-)
United States; 1936-1937
Given by Hilaire Hiler 1960-244-11,-12,-13,-15
- 53 Munsell color tree; hue, value and chroma for ten major hues
Given by the Munsell Color Company, Inc.
1960-143-1

Color is naturally created or artificially manufactured in ways that are essentially chemical in origin and technique.

- 54 Raw glazes and fired glaze samples
Given by American Art Clay Company
- 55 Raw cosmetic pigments
Given by H. Kohnstamn & Company, Inc.
- 56 Automobile paint color samples
Given by Allied Chemical Corporation,
National Aniline Division, Harmon Colors
- 57 Beaker; earthenware, crazed copper glaze
Théodore Deck (1823-1891)
France; late 19th century
Given by the Misses Hewitt 1931-48-21
- 58 Cup; ceramic frit
Egypt; XVIII-XIX dynasty (16th-13th centuries,
B.C.)
Purchased in memory of the Misses Hewitt
1960-29-1
- 59 Lamp; earthenware
Mesopotamia, Rakka; 12th-13th century
Purchased in memory of David Wolfe Bishop
1958-72-3
- 60 'Shawabti' (figure of a servant for the after-life);
faience
Egypt; late dynastic, 7th-4th century B.C.
Given by the Estate of David Wolfe Bishop
1951-84-40
- 61 Figurine of lion-headed goddess; glass paste
Egypt; late dynastic, 7th-6th century B.C.
Given by the Estate of David Wolfe Bishop
1951-84-21
- 62 *The Immaculate Virgin*; porcelain, polychrome and
gilt
Model attributed to Wenzel Ney
Germany, Fulda; 1770-1780
Given by the Trustees of the Estate of
James Hazen Hyde 1960-1-42
- 63 Textile; brocaded silk taffeta dyed with fuchsine,
the earliest stable synthetic dye
France; late 19th century
Given by J. Pierpont Morgan 1902-1-803a

Color is perceived through a complex series of actions involving the eye and the brain. Optical response accounts for such phenomena as the simultaneous contrast of colors.

- 64 *De la Loi du Contraste Simultané des Couleurs*,
book
Michel-Eugène Chevreul (1786-1889)
France; Paris; 1839
Cooper Union Museum Library
- 65 Snuff bottle; cameo-cut overlay glass
China; Tao Kuang period (1821-1851)
Given by the Misses Hewitt 1931-64-51

- 66 Blouse; cotton and rayon appliqué and patchwork
Panama, San Blas Islands; 20th century
Given by Mrs. John Winslow 1960-58-1

Optical mixture of two colors, in which the eye sees neither as it is seen in isolation but an apparent third color, is called *fusion*.

- 67 Scarf; silk ikat
Bali; 19th century
Given by Mrs. R. Keith Kane from the
Estate of Mrs. Robert B. Noyes 1943-5-10
- 68 Detail and enlargement of a poster printed in Three-
Color Process
- 69 Two exercises in color luminosity; tempera on card-
board
Modesto Chiesa
United States, New York; 1960
Lent by the Cooper Union School of Art and
Architecture
- 70 Plates from *The Four-Color Process Guide*
Published by Collier Photo Engraving Company
Printed by Graphic Publishing Company, Inc.
United States, New York; 1960
Given by Louis Dorfsman 1960-84-1
- 71 *Pythagoras*; screen-printed cotton
Designed by Sven Markelius (1889-)
Sweden; 1950-1955
Produced and given by Knoll Associates, Inc.
1956-123-1
- 72 Demonstration of lighting differences on color
Made by General Electric Company, Large Lamp
Department
Purchased, Pauline Riggs Noyes Fund 1960-252-1
- 73 *Design for a Chinese Pavilion*; watercolor and . . .
tempera
Frederick Crace (1779-1857)
England, London; 1815-1822
Purchased in memory of Annie I. Kane 1948-40-79
- 74 *Processional objects*; opaque watercolor
China; 1794-1804
Purchased in memory of Emily Howland Chauncey
1960-221-1
- 75 *Spectrum*; printed cotton
Designed by Rolf Middelboe
Denmark; 1950-1955
Given by Jack Lenor Larsen, Inc. 1960-170-1

The use of color as symbol is not alone restricted to rank or ritual; it also serves as a method of identification, today as well as in the past.

- 76 Birdcage; glass, metal and wood
Traditional symbolism links blue domes with the
celestial world
Italy; early 19th century
Given by the Misses Hewitt 1916-19-92

- 77 Two playing cards; block-printed in color
Spain; early 19th century
Given by Mrs. Edward C. Moën 1952-135-1
- 78 Bracelet with amulets; coral and gold
Coral has been thought by many peoples to have
homoeopathic magical powers
Italy; about 1870
Given from the Estate of and in memory of
Mrs. Robert B. Noyes 1946-50-19
- 79 Necklace; coral, gold and silver
Turkey; late 19th century
Given by Miss Sarah Cooper Hewitt 1931-6-182
- 80 Multi-conductor cable, pre-wired hook-up for a
complex electrical circuit. Colors serve as guide in
final assembly. 1960-253-1
- 81 *Kian*, embroidered nuptial scarf; hemp and metal on
ramie.
Orange, red and black are considered the requisite
colors for a wedding in parts of the Buddhist
world.
Sumatra; late 19th century
Purchased, Au Panier Fleuri Fund 1956-18-1
- 82 Chart of code for identification of heraldic colors,
the earliest known system of color codification.
The importance of color in heraldry derives from its
dual use as symbol of a clan or family, and of
personal attributes of individual members of the
clan or family.
- 83 Seal box and cover, with seal of Leopold II (1747-
1792); brass and sealing wax
Austria; 1790-1792
Given by the Estate of Mrs. Lathrop Colgate Harper
1957-165-15a, b
- 84 Gaming purse; silk and metal, embroidered
Austria or Germany; mid-18th century
Given by Irwin Untermyer 1959-170-4

RHYTHM

Rhythm is more often associated with music and poetry than with visual design, but is, nevertheless, an integral part of the designer's craft. An orderly repetition of pattern, color or motif, rhythm produces exactly the same stimulus for the eye as does verbal or musical rhythm for the ear.

Variations in pattern, ranging from a simple scroll to an intricate series of mixed motifs in which variations of technique as well as design add to an overall rhythmic character, allow for degrees of complexity in rhythmic pace.

- 85 Designs for stencilled wall decoration; pencil and
opaque watercolors
Austria, Vienna; about 1830
Purchased in memory of Mary Hearn Grimes
1940-120-9,-50;-24,-7

- 86 *Baroque Stripe*, wallpaper; silk-screened paper
Jack Lenor Larsen (1927-)
United States; 1960
Given by Karl Mann Associates 1960-91-1
- 87 *Citadel*, wallpaper; silk-screened paper
Jack Lenor Larsen (1927-)
United States; 1960
Given by Karl Mann Associates 1960-91-2
- 88 *Stage Design: A Palace Hall*; pen and ink with
ink and grey washes
Manner of Ferdinando (Galli) Bibiena (1657-1743)
Italy; about 1740
Purchased, General Funds
From the Piancastelli Collection 1938-88-73
- 89 *Two-dimensional Construction*; wood on cardboard
Ayilda Sikora (1942-)
United States, New York; 1960
Given by the Cooper Union School of Art and
Architecture 1961-20-2
- 90 Panel; carved oak
France; 1795-1805
Given by George Arnold Hearn 1902-9-4
- 91 Textile panel; silk embroidery on linen
Greek Islands, Thasos; 18th century
Given by the Provident Securities Company
From the collection of Mr. and Mrs. William H.
Crocker 1955-133-1
- 92 Two furniture mounts; gilt bronze
France; about 1800
Given by Jacob H. Schiff 1904-20-553,-137.
- 93 *Wave at Satta Point*, from the *Thirty-six Views of
Fuji* series:
Woodcut in colors
Hiroshige (Ichiryusai) (1797-1858)
Japan; about 1857
Given by the Estate of Mrs. Robert H. Patterson
1941-31-120
- 94 Seal, initials A. G.; gilt bronze
Hector Guimard (1867-1942)
France; about 1905
Given by Mme. Hector Guimard 1956-76-3
- 95 Three textiles; block-printed cotton
Raoul Dufy (1877-1953)
France; 1920-1924
Purchased, Au Panier Fleuri Fund 1934-14-1,-2,-4
- 96 Wallpaper; machine-printed with details printed
from woodblocks
England; 1890-1895
Given by Miss Annie May Hegeman 1936-5-4

*

*

LIBRARY OF THE
COOPER-HEWITT MUSEUM OF DESIGN

SMITHSONIAN INSTITUTION LIBRARIES

3 9088 00246029 3

chm NK460.N5C77c

Cooper Union Museum gallery guide to ele